## **EXECUTIVE SUMMARY**

Date Summary Prepared: December 16, 2004

Mine Name: Deer Trail Mine and Mill	<b>I.D. Number:</b> M/031/003
Operator: Unico Incorporated	Date Original Notice Received: December 1, 2004
Address: 951 East 2700 South	County: Piute
Pleasant Grove, Utah 84062	New/Existing: Status changing from SMO to LMO
	Mineral Ownership: FEE/ Forest Service
<b>Telephone:</b> (801) 361-4242	Surface Ownership: FEE/ Forest Service
Contact Person: W. Dan Proctor	Lease No.(s):
<b>Telephone:</b> (801) 361-4242	Permit Term: Life of Mine

# Life of Mine:

**Legal Description**: Portions of: the NW1/4 of Section 18, Township 28 South, Range 3 West, SLBM; the NE1/4 of the SE1/4 and the SE1/4 of the SE1/4 of the NE1/4 of Section 11; the SW1/4 of the SW1/4 of the NW1/4, the SW1/4, and the S1/2 of the SW1/4 of the SE1/4 of Section 12; and the N1/2 of the NW1/4 of the NE1/4 of Section 13, Township 28 South, Range 4 West; SLBM, Piute County, Utah

Mineral(s) to be Mined: Iron, Zinc, Gold, Silver, Copper and other base metals

Acres to be Disturbed: 12.81

Present Land Use: Mining and grazing for wildlife and domestic animals. Also used as access to an electrical switching station owned and operated by Utah Power and Light Company and irrigation controls on Cottonwood Creek.

Postmining Land Use: Same as pre-mining use.

Variances from Reclamation Standards (Rule R647) Granted: No variances requested.

#### Soils and Geology

Soil Description: Soil at the Mill is "Hiko Peak cobbly loam" which is 35% rock. Thickness of the soils is less than 10 inches. Sub-surface material below the soil is 60% rock and 40% gravel to sand with minor humus.

Special Handling Problems: Stony, difficult to salvage. Soil for reclamation will come from a recent mudflow onto the permit area. The mudflow originated on the mountainside above the permit area from summer thunderstorms following a wildfire.

Geology Description: The Deer Trail Mine is located near the center of the Marysvale volcanic field in the High Plateaus of west-central Utah at the eastern base of the Tushar Mountains. These high plateaus form a transition between the Colorado Plateau and the Basin and Range Provinces, and consist typically of relatively flat-lying sedimentary and volcanic rocks that have been broken by late Cenozoic extensional faulting into elongate north-trending mountains separated by narrow alluviated structural troughs.

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The Deer Trail Mine workings expose westerly dipping sedimentary rocks of three units: The Toroweap, Quantoweap Formations and Caville Limestone. The Deer Trail ore bodies are in the lower part of the Toroweap Formation and consist of nearly continuous groups of semiconcordant replacement bodies.

# **Hydrology**

Ground Water Description: Depth of groundwater is 200 to 800 feet. Water was encountered in the lower depth of the old mine workings. No impacts to the ground water system are expected from this operation.

Surface Water Description: Cottonwood Creek flows between the PTH tunnel area and the millsite. The creek is diverted for irrigation just above the millsite. No other perennial surface water exists within or adjacent to the permit area.

Water Monitoring Plan: Water levels of the tailings impoundment will be constantly monitored in order to detect any leak(s). The springs downstream will be tested on regular basis to detect the presence of any chemicals or heavy metals that could be linked to operation. Likewise, the waters upstream will also be tested on regular basis in order to detect presence of chemicals or heavy metal caused by nature of other operations upstream from this operation. Any irregularities will be promptly reported to the appropriate agency(s). Mitigation of such an event will require operations to cease until problem is corrected. Any release of hazardous materials into the groundwater or surface water will be quickly stopped an measures taken to neutralize the release. Any downstream occupants would be notified of any such release. Department of Water Quality permit has been obtained. Tailings will be sampled on a regular basis to detect the presence of dangerous substances that may exceed limitations

#### **Ecology**

Vegetation Type(s); Dominant Species: The mine is located within the mountain shrub/pinyon juniper community. Dominant species include pinyon, juniper, mountain big sagebrush, rabbitbrush, mahogany, indian ricegrass, and western wheatgrass. Vegetation ground cover was estimated to be 40%. The revegetation success standard for this site will be 28% ground cover (70% of 40%)

Wildlife Concerns: The tailings pond area will be surrounded by a six-foot high fence to prevent wildlife from gaining access to the tailings impoundment waters.

Surface Facilities: lab, sample preparation trailer, office, shop, mill, substation, compressor building, light room w/tunnel cover, freshwater pond and tailings pond.

#### Mining and Reclamation Plan Summary:

**During Operations**: Mining to be conducted underground via the PTH tunnel. Reprocessing of waste dump material from the Upper Deer Trail Mine will also occur. These materials will be transported to the Mill where the ores will be crushed and run through a floatation process to concentrate the ores. The final concentrate will be thickened and decanted of any moisture. The decanted concentrate will be bagged and shipped to be custom smelted by outside sources. All water will be recycled through the concentrating process, additional water coming from the freshwater make-up pond or decanted water from the surface of the tailings pond. Water from Cottonwood Creek will be used in the milling circuit. The total acres disturbed is 12.81 acres including ponds,

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dumps, mining and processing facilities. No additional waste material will be generated from the mining of the PTH tunnel. The tailings will consist of ground limestone, dolomite, and quartzite with minor amounts of Pb and Zn and residual reagents used in the concentrating process. The tailings are stored in a HPDE lined pond approved by the division of Water Quality. The mine also has an approved Air Quality permit.

# **After Operations:**

The regrading of the PTH dump area (3.1 acres) will occur and 6 inches of soil will be placed on top of the regraded dump. The upper Deer Trail Dump (.86 acres) will be contoured, scarified, and seeded with no soil added after the dumps has been processed. Any remaining screened dump material (.25 acres) will receive 10 inches of soil. The fresh water pond area (.73 acres) will be backfilled and covered with an additional 2 inches of soil. The mill area including the tailings impoundment (3.2 acres) will be regraded and receive 10 inches of soil. The total amount of soil needed for reclamation of the site will be 7,322 cubic yards. Soil to be used for reclamation will be obtained from the recent mud flows which occurred above the mine. These mudflows were the result of heavy precipitation event in an area impacted by recent forest fires, which deposited a major amount of soil and organic matter at the Upper Deer Trail Area. There is approximately 30,000 cubic yards of these soils available for reclamation purposes. At the end of operations the tailings pond will be capped to the level of the dam. The capped tailings will be seeded with the prescribed seed mix. Presently there are no known drill holes on the surface as all drilling occurs underground, so no plugging is needed. All shafts will be covered with reinforced steel grates to allow for bat entry. All adits and tunnels will be closed with bat grating, except for No.2 tunnel which will be pushed in and closed with the portal timbers and existing soils adjacent to the portal. Any debris, buildings etc. will be hauled away to a local landfill in Marysvale. No buildings, utilities, drainage structures, and impoundments will be left behind or unreclaimed. The cement in the mill building will be broken up and buried.

## Surety

**Amount**: \$136,100

Form: Certificates of Deposit (Wells Fargo Bank)

Renewable Term: 5 years 2009

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